



Malcolm Short, Schaeffler

LuK Clutch Academy

Suzuki Alto 1.0 K10B

The owner of a 2010 Suzuki Alto, fitted with a 1.0-litre, three-cylinder K10B engine that had covered more than 70,000 miles, had reported clutch slip. The slip was confirmed by a short road test and clutch replacement was advised.

The Suzuki Alto is quite a popular car on today's roads; its initial cost being relatively low and with a good return on fuel. Suzuki launched the Alto in 1979 and the latest Suzuki Alto is the eighth generation.

When opening the bonnet and carrying out an initial inspection, working space is of a premium, but with a little guidance, this is good repair for any garage with a book time of 5.1 hours.

For this repair we used the following workshop equipment – a two-post ramp and a transmission jack.

With the car placed on the ramp, starting in the engine bay, disconnect and remove the battery, battery case and battery carrier. The wiring loom retaining clips need to be unclipped from the battery carrier when removing.

Now remove the air box/induction noise damper, allowing more access to the gearbox and bell housing area, slacken the clutch cable and remove the cable from the clutch release arm, open the plastic retaining clip to release the cable and then slide the outer cable out from the support bracket (light lubrication may help the rubber slide out of the bracket) and stow in the bulkhead area. Remove the clutch cable support bracket, as this gives a little extra room.

Disconnect the reverse light switch multiplug and stow the loom in the inner wing. Disconnect the gear change cables from the selector mechanism by removing the 'U clip' from the front cable (fig 1) and then detach it from the ball pivot, disconnect the



rear cable by removing the bolts from the pivot point bracket and removing the assembly (note – there is a small nylon bush located in this assembly that can fall out), slide the outer cables upwards out of their support bracket and stow in the bulkhead

area and then disconnect the gearbox earth wire and bracket.

Now remove the upper bell housing bolts, while the vehicle is on the ground and the bolts are easily accessible, storing in order and location. Slacken both driveshaft hub nuts and raise the vehicle to waist height. Remove both front wheels and hub nuts and the plastic shield in the N/S/F wheel arch area, raise the vehicle to access the underside, drain the gearbox oil and then remove the locking pins from both bottom ball joints nuts and then take out the nuts and release both bottom ball joints. Both driveshafts can then be released from the hubs.

Using a lever, 'snap' the inner driveshaft joints out of the gearbox as these are retained by sprung loaded retaining rings and remove the driveshafts and stow safely. Now remove the rear gearbox mount, which is done by releasing the mounting from the bracket and then the bracket from the gearbox. The mounting and the bracket cannot be fully removed, but move it to give enough room to work.

Remove the rear bell housing bolts, which are now accessible, and support the engine (we used a transmission jack in this instance) close to the bell housing area. Now remove the front gearbox mounting and remove the mounting bracket from the gearbox, lower the transmission jack about 50mm to aid gearbox removal and remove the final bell housing bolts. The gearbox can now be removed from the vehicle, either by lifting it out by hand or using a second transmission jack.

With the gearbox removed, the clutch can be removed from the flywheel and the diagnosis confirmed that the clutch is worn out. This vehicle is fitted with a solid flywheel, so inspect the flywheel for any damage or heat cracks, confirming the flywheel is serviceable and remove the glaze from the flywheel face with some Emory cloth, and clean the flywheel area with some clutch and brake dust cleaner. Remove the release bearing from the release arm in the bell housing.

At this point, we noticed that the release fork/arm had restricted movement due to the build-up of clutch dust at the pivot points and would not return to its rest position (fig 2) so we cleaned out the clutch dust with clutch and brake dust cleaner, and inspected the release system for any wear and



checked for correct and full operation (fig 3).

Fit the new release bearing, applying a very small amount of high melting point grease to the pivot areas, as these are all metal. Apply a small amount of high melting point grease to the gearbox input shaft splines, then mount the clutch plate, confirming it is correct, and remove the clutch plate and wipe off any excess grease. Now mount the new clutch assembly onto the flywheel using a clutch alignment tool, ensuring the clutch plate is installed correctly with 'Gearbox side' or 'Getriebe Seite' markings on the clutch plate facing the gearbox, tightening and torquing the bolts evenly and sequentially.

Re-fit the gearbox in reverse order of removal and refill the gearbox with oil. Before fitting the clutch cable, check the cable for free operation and when adjusting the clutch cable always remember to leave a little free play at the top of the pedal to ensure a full release. Once the repair is complete, carry out a road test to ensure the clutch and gear change operation are correct and all electrical items have been reset after re-connecting the battery.

Check out the full workshop instructions and online support at www.repxpert.co.uk or contact the LuK Technical Hotline on +44 1432 264 264.

